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ABSTRACT

This program was designed to supplement the New York City tax levy educational program provided for 2128 underachieving socially maladjusted, emotionally disturbed students in grades three through twelve. Most of the students were enrolled in 16 special day schools for the socially maladjusted and emotionally disturbed. The remaining students were enrolled in eight cluster schools with a total of 22 sites in treatment centers, psychiatric hospitals and special classrooms in regular schools. Instruction in reading and mathematics took place in small groups or on an individualized tutorial basis. In some school settings students were tested, diagnosed and instructed in a reading laboratory setting equipped with software and hardware for reading systems such as EDL, SRA, Didactics, Mind, Auto-Tutor, and Systems 80. Mathematics instruction in schools with laboratories was conducted using calculators, Geo-Boards, SRA Multiplication Kits, puzzle kits and games. The evaluation of this program found that the program improved reading and mathematics skills of students as defined by scores on the Stanford Achievement Tests. It was concluded that a major reason for this success was probably due to the one-to-one and small group instruction. Tables of pre and posttest data are included in the appendices. (Author/PR)

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EVALUATION REPORT

Function # B/E 09-61693

IMPROVING INSTRUCTION AND SERVICES IN SCHOOLS FOR SOCIALLY MALADJUSTED, EMOTIONALLY DISTURBED CHILDREN

Evaluation Period
School Year 1975-1976

BEST COPY AVAILABLE

Rebecca C. Curtis, Ph.D.

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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An evaluation of a New York City School district educational project funded under Title I of the Elementary and Secondary Education Act of 1965 (Pl 89-10) performed for the Board of Education of the City of New York for the 1975-76 school year.

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Chapter I: THE PROGRAM

This program was designed to supplement the city tax levy educational program provided for 2128 underachieving socially maladjusted, emotionally disturbed students in grades three through twelve. Most of the students were enrolled in 16 special day schools for the socially maladjusted and emotionally disturbed. The remaining students were enrolled in eight cluster schools with a total of 22 sites in treatment centers, psychiatric hospitals, and special classrooms in regular schools. The personnel in the program included 11 assistant principals, 17 reading teachers, five mathematics teachers, 88 paraprofessionals, four guidance counselors, four secretaries, a curriculum specialist, and the project coordinator.

The program was designed to enable pupils to achieve statistically significant improvement in reading and/or mathematics skills as measured by the Stanford Achievement Tests and to enable pupils to master at least six instructional objectives in reading and/or mathematics as measured by the Houghton Mifflin criterion-referenced tests. Instruction took place in small groups or on an individualized tutorial basis. Students were provided two to three 50-minute periods of intensive instruction in reading and/or mathematics each week in addition to the normal classroom teaching of these skills. Students were selected for the program if they qualified as economically deprived as defined by the Title I Elementary and Secondary Education Act guidelines and were two or more years below the norm for their grade level in reading and/or mathematics.

In the 16 day schools and in two of the eight cluster schools, students were tested, diagnosed, and received instruction in a laboratory setting equipped

with software and sophisticated reading systems such as EDL, SRA, Didactics, Mind, Auto-Tutor, and Systems 80. The reading program in the remaining sites offered one-to-one and small group instruction with software only. A total of 1818 pupils were served by the supplemental reading program.

The supplemental mathematics program was mounted in five day schools. Mathematics specialists with the assistance of five Title I paraprofessionals were assigned the same responsibilities as the reading teachers for children who had marked deficiencies in math skills. Mathematics laboratories were equipped with manual calculators, Geo-Boards, SRA Multiplication Kits, puzzzle kits, and math games. A total of 310 pupils participated by attending the math laboratories.

In each of the 38 facilities involved in this project, the program supplemented the regular city tax levy instructional program. This tax levy program included support from a clinical staff consisting of psychiatrists, psychologists, social workers, and guidance counselors supplied by the Bureau of Child Guidance and the Bureau of Educational and Vocational Guidance.

The Title I program provided individualized instruction based on diagnoses made from the testing of specific skills. In addition to the diagnoses determined from the criterion-referenced tests, deficiencies were determined by such tests as the Roswell-Chall Diagnostic, Slingerland, and Bender-Gestalt in the treatment centers and psychiatric hospitals. The learning prescriptions were implemented subsequently both in the laboratories and in the regular classrooms. The program operated from September 29, 1975, through June 28, 1976.

Chapter II: EVALUATIVE PROCEDURES

There were five evaluation objectives which are listed below:

1. To determine if, as a result of participation in the program, there is a statistically significant improvement in pupils' reading achievement.

2. To determine if, as a result of participation in the program, there is a statistically significant improvement in the pupils' mathematical achievement.

3. To determine if, as a result of participation in the program, 70 percent of the pupils master at least six instructional objectives in both reading and mathematics which prior to the program they did not master.

4. To determine, as a result of participation in the program, the extent to which pupils demonstrate mastery of instruction objectives.

5. To determine the extent to which the program, as actually carried out, coincided with the program as described in the Project Proposal.

The first two objectives were evaluated by analysis of scores on the Stanford Achievement Tests in reading and mathematics. The data were analyzed by the "Real Posttest vs. Anticipated Posttest" design. The historical regression analysis was applied to pretest results to determine the expected posttest results. The difference between actual (Real) posttest and predicted posttest grade equivalent means were subjected to a correlated *t* test to ascertain statistical significance at the .05 level for the reading comprehension subtest of the reading achievement test and the computation subtest of the mathematics achievement test. The pretests were given in October, 1975, or whenever the student entered the school. The posttesting was done in late April or early May, 1976, or whenever a student was discharged from a school.

In order to accomplish the third and fourth evaluation objectives, student records of pretest and posttest mastery on the criterion-referenced tests were

examined. All participants were administered selected tests from the Houghton Mifflin battery as a pretest to ascertain individual instructional objectives for each pupil. For each instructional objective diagnosed by pretest failure as requiring remediation, a posttest was administered on an individual basis after an appropropriate interval of instruction. The pretests in reading were administered in October and subsequently throughout the program when a child needed additional instructional objectives. The pretests in mathematics were administered beginning in January. Posttests were given at appropriate intervals throughout the life of the program.

Chapter III: FINDINGS

The first evaluation objective stated: "To determine if, as a result of participation in the program, there is a statistically significant improvement in pupils' reading achievement." Data analyses of the reading scores on the Stanford Achievement Test revealed that students who participated in the program for seven months generally obtained significantly higher posttest scores than were expected on the basis of their previous performance ($p < .01$).

The second evaluation objective was "To determine if, as a result of participation in the program, there is a statistically significant improvement in the pupils' mathematical achievement." Analyses of the math scores on the Stanford Achievement Test revealed that students who participated in the mathematics program for seven months also generally obtained significantly higher posttest scores than would be expected based on the previous performance of these students ($p < .05$ for grades four through six; $p < .001$ for grades seven through nine).

The third evaluation objective stated: "To determine if, as a result of participation in the program, 70 percent of the pupils master at least six instructional objectives in both reading and mathematics which prior to the program they did not master." The evaluation design required that this objective be analyzed according to the New York State classification system. The 1441 students whose criterion-referenced test data in reading were analyzed would need to master a total of 6048 objectives in order for this goal to be met. As totaled from Table A, only 3812 objectives in reading, according to the state classification system, were mastered by those 1441 participants. The 220 students in mathematics whose data are included in Table A would need to have mastered a total of 824 objectives in order for this goal to be met. They mastered a total of 1233 objectives, according to the state classification

Table A

DISTRIBUTION OF PUPIL MASTERY BY INSTRUCTIONAL OBJECTIVE AS A RESULT OF INSTRUCTION

Instructional Objective	Ratio of $\frac{\#\text{ pupils achieving mastery}}{\#\text{ pupils attempting mastery}}$	Percentage of mastery
2101	$\frac{18}{22}$	81.8%
2102	$\frac{257}{320}$	80.3%
2103	$\frac{183}{196}$	93.4%
2104	$\frac{172}{222}$	77.5%
2105	$\frac{133}{169}$	78.7%
2106	$\frac{427}{567}$	75.3%
2107	$\frac{217}{253}$	85.8%
2108	$\frac{82}{96}$	85.4%
2109	$\frac{227}{278}$	81.7%
2110	$\frac{124}{173}$	71.7%
2201	$\frac{187}{214}$	87.4%
2202	$\frac{74}{85}$	87.1%
2203	$\frac{256}{309}$	82.8%
2204	$\frac{91}{109}$	83.5%
2205	$\frac{42}{48}$	87.5%

Table A, cont.

Instructional Objective	Ratio of $\frac{\#\text{ pupils achieving mastery}}{\#\text{ pupils attempting mastery}}$	Percentage of mastery
2207	$\frac{32}{55}$	58.2%
2208	$\frac{55}{82}$	67.1%
2303	$\frac{20}{29}$	69.0%
2304	$\frac{145}{155}$	93.5%
2305	$\frac{131}{216}$	60.6%
2402	$\frac{43}{63}$	68.2%
2403	$\frac{39}{55}$	70.9%
2404	$\frac{175}{220}$	79.5%
2405	$\frac{16}{16}$	100.0%
2406	$\frac{120}{296}$	40.5%
2408	$\frac{109}{174}$	62.6%
2409	$\frac{90}{124}$	72.6%
2410	$\frac{94}{141}$	66.7%
2411	$\frac{9}{12}$	75.0%
2412	$\frac{41}{60}$	68.3%
2501	$\frac{19}{25}$	76.0%
2502	$\frac{146}{195}$	74.9%

Table A, cont.

Instructional Objective	Ratio of $\frac{\#\text{ pupils achieving mastery}}{\#\text{ pupils attempting mastery}}$	Percentage of mastery
2503	$\frac{16}{20}$	80.0%
2504	$\frac{14}{19}$	77.8%
2506	$\frac{8}{18}$	44.4%
1101	$\frac{151}{164}$	92.1%
1102	$\frac{42}{46}$	91.3%
1103	$\frac{31}{34}$	91.2%
1104	$\frac{1}{3}$	33.3%
1106	$\frac{1}{2}$	50.0%
1107	$\frac{45}{55}$	81.8%
1108	$\frac{138}{152}$	90.8%
1109	$\frac{22}{30}$	73.3%
1110	$\frac{29}{43}$	67.4%
1111	$\frac{19}{19}$	100.0%
1112	$\frac{33}{36}$	91.7%
1114	$\frac{32}{37}$	86.5%
1116	$\frac{2}{7}$	28.6%
1201	$\frac{153}{164}$	93.3%

Table A, cont.

Instructional Objective	Ratio of $\frac{\#\text{ pupils achieving mastery}}{\#\text{ pupils attempting mastery}}$	Percentage of mastery
1202	$\frac{31}{35}$	88.6%
1203	$\frac{22}{30}$	73.3%
1205	$\frac{110}{132}$	83.3%
1207	$\frac{0}{1}$	0.0%
1208	$\frac{98}{109}$	89.9%
1209	$\frac{95}{108}$	87.9%
1302	$\frac{28}{36}$	77.8%
1305	$\frac{40}{48}$	83.3%
1306	$\frac{24}{32}$	75.0%
1401	$\frac{22}{42}$	52.3%
1503	$\frac{6}{32}$	18.8%
1504	$\frac{0}{20}$	0.0%
1604	$\frac{10}{10}$	100.0%
1704	$\frac{16}{23}$	69.6%
1902	$\frac{32}{39}$	82.0%

system.

It should be noted, however, that Table A is not meaningful in evaluating the success of the program. A state instructional objective frequently included several objectives from the Houghton Mifflin test system. In order to receive credit for mastering a state instructional objective, a student was required to master all Houghton Mifflin objectives included under a state objective. Teachers, however, did not give instruction based upon the state classification system. Therefore, a student may have mastered six objectives according to the Houghton Mifflin test system, yet have received no credit for mastering any state instructional objectives if he or she did not master the other Houghton Mifflin objectives included under those state codes.

The fourth evaluation objective stated: "To determine, as a result of participation in the program, the extent to which pupils demonstrate mastery of instructional objectives." The distribution of the number of Houghton Mifflin objectives mastered after instruction appears in Table B. In reading, only 39 percent of the students included in this analysis mastered six or more objectives. Only 47 percent mastered five or more objectives. In no grade group (one through three, four through six, seven through nine, or ten through twelve) did 70 percent of the students master six or more objectives in reading. In mathematics, 72 percent of the students mastered six or more objectives.

Table C presents the distribution of the percentage of pupils achieving various levels of mastery of instructional objectives. Approximately half of the students achieved 90 percent or more of the objectives they attempted in reading. In mathematics approximately half of the students achieved

Table B

DISTRIBUTION OF THE NUMBER OF INSTRUCTIONAL OBJECTIVES MASTERED AFTER INSTRUCTION

Number of Instructional Objectives Mastered in Reading	Number of Pupils	Percentage of Pupils
None	144	10.0%
1-2	303	21.0%
3-4	320	22.2%
5-6	300	20.7%
7-8	174	12.0%
9-10	107	7.0%
11-12	38	2.6%
13-14	19	1.3%
15-16	14	1.9%
17-18	3	.2%
19-20	5	.3%
21-22	3	.2%
23-24	4	.2%
25-26	2	.1%
27-28	1	.07%
29-30	1	.07%
31-32	1	.06%
33-34	0	0.0%
35-36	2	.1%
Total	1441	100.0%

Number of Instructional Objectives Mastered in Mathematics	Number of Pupils	Percentage of Pupils
None	15	6.8%
1-2	25	11.4%
3-4	13	5.9%
5-6	30	13.6%
7-8	64	29.1%
9-10	31	14.1%
11-12	26	11.8%
13-14	10	4.5%
15-16	3	1.4%
17-18	3	1.4%
Total	220	100.0%

Table C

DISTRIBUTION OF PERCENTAGE OF PUPILS ACHIEVING VARIOUS LEVELS OF MASTERY OF INSTRUCTIONAL OBJECTIVES

Percentage of Mastery of Instructional Objectives In Reading (# Objectives Achieved) / (# Objectives Attempted)	Number of Pupils	Percentage of Pupils
90 - 100%	701	48.6%
80 - 89%	84	5.8%
70 - 79%	103	7.2%
60 - 69%	123	8.5%
50 - 59%	141	9.8%
40 - 49%	50	3.5%
30 - 39%	46	3.2%
20 - 29%	36	2.5%
10 - 19%	13	.9%
0 - 9%	144	10.0%
Total	1441	100.0%

Percentage of Mastery of Instructional Objectives In Mathematics (# Objectives Achieved) / (# Objectives Attempted)	Number of Pupils	Percentage of Pupils
90 - 100%	52	23.6%
80 - 89%	54	24.6%
70 - 79%	33	15.0%
60 - 69%	10	4.6%
50 - 59%	19	8.6%
40 - 49%	15	6.8%
30 - 39%	19	8.6%
20 - 29%	3	1.4%
10 - 19%	0	0.0%
0 - 9%	15	6.8%
Total	220	100.0%

80 percent or more of the objectives they attempted. Apparently, teachers in mathematics gave instruction in a greater number of objectives per child than did teachers in reading.

The fifth evaluation objective stated: "To determine the extent to which the program, as actually carried out, coincided with the program as described in the Project Proposal." Visits to the program sites indicated that the program generally coincided with the proposal insofar as the objectives, activities, equipment, and staff were concerned.

Two discrepancies between the program proposal and implementation were noted. First, the program was not able to begin on September 4, 1975, due to a city-wide teachers' strike. The program actually did not commence until September 29. Furthermore, the regular school day for students in these sites was 9:00 A.M. to 2:00 P.M., not 9:00 A.M. to 3:00 P.M. Testing with the criterion-referenced tests (CRT's) in reading did not begin until mid-October. Many students did not receive CRT pretests in reading until January. Teachers reported that 190 students in reading never received instruction in objectives they failed on pretests, or never received any pretests they failed. The individualized testing frequently required with these pupils may have contributed to this situation. Also, city layoffs and replacement of staff brought laboratory staff untrained in the use of CRT's to two schools in January. Pretesting with the CRT's in mathematics did not begin until January. Math teachers said they didn't understand how the system worked until December or didn't have CRT materials until then. By the beginning of February, no failures on mathematics pretests had been obtained for some students. Teachers reported a total of 82 pupils in mathematics who were not diagnosed using the CRT's before beginning instruction.

The second discrepancy noted was that some personnel were required by school principals and the city board of education to spend time in non-project activities. For example, project staff were required to supply and administer norm-referenced achievement tests and criterion-referenced tests to students who were not in the target population in some sites. Project teachers were also responsible for administering a bilingual examination to all students with Spanish family names. Most assistant principals did not appear to spend much time in teacher training.

The program serviced the needs of the specific target population for which it was designed, and only these students, with the exception of the test administration described above and the inclusion of some students in the target population who were not fully two years behind in reading. The data from these pupils were excluded from this report.

Findings in Regard to the Recommendations from the 1974-75 Evaluation.

Recommendations from the 1974-75 evaluation report were as follows.

1. There should be provision for hiring substitutes for paraprofessional aides, who are absent for an extended period of time.
2. Each of the 18 special schools should be staffed with an assistant principal or team coordinator, who is responsible for coordinating the reading program, meeting with staff regularly, and insuring that reinforcement takes place in every aspect of the curriculum. At the seven treatment centers it is recommended that two team coordinators be assigned on a rotating basis.
3. The mathematics laboratories should be extended beyond the present four sites to include the remaining 21 sites.
4. The facilities and equipment in the seven treatment centers should be improved to provide adequate staff space and additional

software materials, together with mini-laboratories.

5. The four secondary schools and the treatment centers which service an adolescent population up to 19 years of age, should be diploma granting institutions.

The first recommendation was impractical, considering the disturbed nature of the students. Implementation of the second recommendation to provide on-site supervisory staff was precluded on a full-time basis by budgetary limitations. Although improved monitoring techniques were planned for this year, there was still a need for one person to be responsible for project implementation in each school or cluster.

The third recommendation was that mathematics laboratories be extended to all facilities. Budgetary limitations restricted the amount of expansion which could be achieved. One new math lab was mounted this past year.

In regard to the fourth recommendation, additional software materials were provided in the seven treatment centers, although not at the beginning of the school year. Staff space in most treatment centers improved during the course of the year. Reading laboratories were mounted in two treatment centers where space permitted. In a few treatment sites, space is still inadequate.

The fifth recommendation was not within the purview of the project.

Other Findings. Generally, visits to the program sites indicated that the program this year was very effective. The laboratories functioned efficiently, with activities planned for each student in advance of his or her arrival, in most cases. A couple of teachers, however, did not give the students work corresponding to their diagnosed weaknesses, but simply let the pupils follow a sequence through the machines developed the previous

year. On the whole, teachers and paraprofessional aides appeared to be very knowledgeable and talented. Many teachers had developed imaginative techniques for teaching these pupils. One teacher, for example, put many lessons on tape, since the students listened more attentively to the cassettes. Some paraprofessionals held master's degrees. One assistant principal had collected and developed an impressive array of materials for her teachers to use, including many pamphlets on jobs and careers. The program coordinator and the curriculum specialist were extremely dedicated and competent in the field of special education.

Staff and administrator attitudes. Staff and administrator attitudes toward the program were very positive, although the personnel in the treatment centers all complained about the lack of a reading teacher to supervise the paraprofessionals. One principal in a special school did not want the program continued unless a reading teacher was provided. Two principals were extremely slow in delivering tests to their cluster sites. Since no teacher in these sites was responsible for the testing, instruction began without adequate diagnosis. In one site a classroom teacher would not allow the paraprofessional to pretest students on any objectives she thought the pupils might fail.

Principals and teachers suggested that a general orientation meeting, open to all personnel in schools in which the project is implemented, be held during the three days allocated for planning before the school year begins. Teachers say they do not utilize this time effectively. Principals and project staff also requested more input into next year's project proposal. The project coordinator subsequently requested recommendations for next year's proposal from teachers and paraprofessionals at workshop meetings. Currently, however, a Title I proposal encompassing several

previously separate projects is being designed with no input from even the project coordinator.

The staff were satisfied with the number and content of the workshops this year. They suggested that the meetings next year be oriented toward the sharing of teaching methods and materials. Some personnel expressed a desire for more demonstrations of simple repairs on the equipment, some would like to hear techniques for dealing with aggressive and withdrawn students, some would like to know more linguistics approaches to use with older teenagers. Paraprofessionals preferred that their meetings consist sometimes of separate groups meeting simultaneously to discuss different topics of interest.

Student attitudes. Most students liked the equipment and the teachers. Their attitudes toward school in general and much of their work in the laboratory were still far from optimal, however. Sometimes when students were left alone at work with the machines, they did nothing. Staff had to be constantly on guard to prevent potential fights. Teachers believed the individual booths which they had constructed aided in preventing many disruptions. A positive effect of the program was seen in one school which reported that pupils came back to the lab for extra help in the afternoons after being promoted to other schools. The fondness of the pupils for the teacher in another school was evidenced by their stopping by at the end of the day to chat.

Supplies and maintenance. The sites are generally supplied well with software and hardware. The students, however, are beginning to tire of the programs available at their sites for particular machines. More cassettes, films, records, etc., were desired for the machines already in use. Many teachers mentioned a need for upper level programs to use on the Mind

machines. Most sites mentioned the need for a repair budget. Teachers had occasionally purchased expensive light bulbs from their personal salaries. Without reliable funds from the city for repairs, expensive machines sometimes lie in disuse. Some staff believed it would be beneficial to hire or train a paraprofessional to do simple machine repairs, since some companies charge large amounts just to visit a site, before adding the costs of parts and labor.

Staff also reported the need for a general supply budget. Some sites have insufficient materials for instruction in particular objectives. Several schools would like to purchase plastic page covers and markers so workbook pages can be used again and again. The program can no longer rely on city funds to provide sufficient paper for duplicating teacher-made materials.

Pedagogy. The lack of motivation of the students assigned to the special schools is reflected in the attendance figures. Staff reported that only about 60 to 70 percent of students enrolled attend on a given day. To increase motivation, teachers suggested the use of materials related to practical aspects of life, such as going to the store or the bank. Several teachers suggested a greater use of music, drama, and sports materials. One teacher found that students were motivated to learn to read and understand the words of songs by popular singers. Motivation was increased in one school by asking older pupils to tutor younger ones. Younger students may have felt less inhibited reading in the presence of someone closer to their own age and older students may have wanted to learn alot so they could perform well as "teachers."

Several teachers tried to motivate their students by giving them a feeling of success on the CRT's. They allowed the pupils to take several surveys which they would likely pass. This seems like a good technique. Some records showed, however, that students had passed an inordinate number of pretests. No learning objectives were ever determined for some students in the program. Teachers should have attempted to administer a few pretests a student would fail as soon as it would have been non-disruptive. Many students needed work on vowels, especially short vowels, the basic 200 words of English vocabulary, and final consonant blends. Teachers can benefit next year by beginning with pretests of these objectives. Teachers can also save time next year by giving instruction in the learning objectives failed on pretests this year and never mastered.

Several teachers were able to motivate students by posting stars or seals for mastered objectives. No schools, however, used the technique of posting achievemnts for each class as a whole and making rewards such as extra gym periods or trips contingent upon the number of objectives a class mastered. This technique would counter fears of destructive competition among students and increase the social acceptability of good performance.

Opinions of the value of the criterion-referenced tests were mixed. Most teachers thought they were useful, some thought they revealed only what the teacher knew anyway, one teacher thought they were of no use beyond fifth grade level, one thought they were of no use beyond first grade level. Some teachers thought that students had difficulty integrating the specific skills into their overall reading. Some teachers thought students would benefit more from the continuity of progressing through particular machine programs than from the exposure to different instructions for different materials related to a particular learning objective.

Although many schools developed a file of materials to be used in the instruction of particular objectives, many instructional materials have not yet been classified in this manner. Such classification is a long and tedious process. Since ~~an~~ published taxonomy of learning objectives and corresponding materials instructing in those objectives is available, several staff members suggested that this taxonomy be purchased for each site.

Consideration must be given to the finding that the program achieved its objectives in terms of the CRT's in mathematics, but failed to do so in reading. This finding was especially surprising since the program started later in math. Furthermore, there were 100 teachers and aides for the 1441 students in the CRT program in reading, or a ratio of approximately one to 14. There were only ten teachers and aides for the 220 students in the CRT program in math, or a ratio of one to 22. Perhaps the students previously had been exposed to math less frequently and failed at it less. Perhaps students could see its value directly in terms of using money. Or, perhaps it is simply easier to teach.

One notable difference between the reading and math labs was the number of pupils in a classroom with the teacher at any given time. In the math labs usually there were no more than three students with the teacher. In the reading labs there were frequently 12 students in the lab with the reading teacher, classroom teacher, and two aides. Frequently, the teachers and aides walked about the room, responding to questions. Reading labs frequently appeared like regular classes with machines and more personnel. The program appeared to be working more effectively in the hospital settings where one-to-one instruction was taking place based on pretest diagnosis, or

where the teacher sat behind the students working with machines. In the reading labs of the special schools, dependence upon the machines may have been too great. The benefits of one-to-one instruction and a personal relationship were less apparentwin the sites using machines.

It should be noted, of course, that the program did achieve its objectives in both reading and mathematics on the Stanford Achievement Tests. The increases in performance on the Stanford were not as remarkable as those which had been obtained the previous year, however. The gains the previous year ranged from 2.0 to 2.9 months for each month in the program for the various grade groups, whereas this year the gains were 1.2 ot 1.4 months for each month in the program. Perhaps the smaller increase was due to the reorganization required by the introduction of the criterion-referenced tests. Hopefully, next year improvements on the Stanford will match and even surpass those of the previous year. If they do not, the cost-effectiveness of the criterion-referenced test program will need to be examined.

Chapter IV: SUMMARY OF MAJOR FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The program attained its objectives regarding improvement in reading and mathematics on the Stanford Achievement Tests. The real posttest scores of students were significantly higher than the anticipated posttest scores. The program also attained its objective in mathematics on the criterion-referenced tests. Seventy-two percent of the students mastered six or more instructional objectives. The program failed to obtain its objective in reading on the criterion-referenced tests. Only 39 percent of the students mastered six or more instructional objectives in reading. The program implementation paralleled the program proposal with two minor exceptions: (1) the program was late in starting, due to a city-wide teachers' strike, and (2) program personnel were required to administer tests to non-target population pupils.

The success of the program was probably due to the one-to-one and small group instruction, the sophisticated reading equipment, the careful planning of each pupil's instruction, and the inservice training workshops. The introduction of the criterion-referenced tests could not be considered a factor leading to the program's success, since greater gains had been obtained in the program the previous year, before the introduction of these tests. Personnel this year spent considerable time trying to learn new procedures and accustom themselves to their execution. Hopefully, benefits from these new procedures will be realized next year.

It is strongly recommended that the program be continued. The program would be improved if the following recommendations are considered:

1. Sufficient tests and answer sheets for the target population should be distributed to reading and mathematics teachers by the end of the first

week of school. The city board of education should furnish tests and answer sheets for any students in program sites who are not part of the target population.

If possible, the tests could be distributed at a meeting before the beginning of school. The project coordinator should deliver tests to any sites not represented at the meeting.

2. If the Stanford Achievement Test is administered to non-target population students in reading or math, classroom teachers should administer these tests in their own classrooms, with testing taking place simultaneously in all classes in the school.

Only problem students should be tested later individually in the reading laboratory. Reading teachers should not be responsible for the administration of mathematics achievement tests in sites with no math labs.

3. Staff should be removed from sites in which principals require them to spend more than 5% of their time in non-Title I activities. With regard to treatment centers, the program should be mounted in only those agency sites which are willing to enthusiastically carry out all activities in the project proposal.

4. The project coordinator and curriculum specialist should each make at least four visits to each site in the project during the course of the school year. No site should be visited less than four times.

These staff members should check to make sure (a) that only Title I eligible students are included in the target population, (b) that learning objectives have been determined for each student who will be in the program at least three months, (c) that the work pupils are given corresponds to their diagnosed weaknesses, (d) that personal contact with pupils takes place

simultaneously with use of machines and (e) that lessons are planned in advance for each student. The coordinator and curriculum specialist should offer pedagogical advice and demonstrate effective teaching techniques. They should notify immediately any personnel added during the course of the year of their duties as Title I staff.

5. The project coordinator should be given the opportunity to make suggestions for the 1976-77 project proposal.

6. The project coordinator should be invited to the monthly principals' meetings in order to make announcements, answer questions, and hear suggestions from school principals.

7. An orientation meeting should be held before the beginning of school, or one afternoon after school, to which all personnel in project schools are invited.

8. A reading teacher, at least on a rotating basis, should supervise each project site. This teacher should allocate his or her time equitably to each site, based on the number of students serviced in the site and the needs and competence of the paraprofessionals.

9. A taxonomy of materials published which instruct in various learning objectives should be purchased for each site and located at each site by October 1.

One such taxonomy available is the High Intensity Learning Systems book published by Random House.

10. A budget for general supplies and for repair of equipment should be provided. If necessary, funds currently allocated for the position of one teacher trainer could be used for this purpose.

11. Workshop meetings should be oriented toward the sharing of teaching methods and materials. Interesting songs and plays for the students to read can be distributed. The meetings of paraprofessionals should sometimes be broken down into small groups.

12. Personal contact in the reading laboratories should increase. Each student should be instructed in a group of no more than three, in the laboratory without the use of machines, at least once every six sessions.

13. Some assistant principals should be assigned to more than one site. They should spend time at each site in proportion to the number of students serviced and the needs and competence of the staff at each site. Assistant principals should be in the laboratory at least five hours a week, and should spend at least 12 hours a week planning for each student, locating instructional materials corresponding to each learning objective, and suggesting ways to teach specific students. They should make certain that each classroom teacher has a list of the learning objectives identified for each student in his classroom of the building.

14. Criteria for the target population should receive more emphasis in workshop meetings with all levels of staff. Teachers should not exclude students from the target population simply because they are discharged during the school year.

15. Reward contingencies, using rewards in addition to praise such as stickers or gym periods, should be set up in each site to improve student motivation.

OFFICE OF EDUCATIONAL EVALUATION - DATA LOSS FORM
(attach to NARRATIVE) Function # 09-61593

In this table enter all Data Loss information. Between the MIR and this form, all participants in each activity must be accounted for. The component and activity codes used in completion of the MIR should be used here so that the two tables match. See definitions below table for further instructions.

Component Code	Activity Code	(1) Group I.D.	(2) Test Used	(3) Total N	(4) Number Tested/ Analyzed	(5) Participants Not Tested/ Analyzed N	(5) %	(6) Reasons Why Students Were Not Tested, Or If Tested, Were Not Analyzed	Number
6.08 13 48	7.15	13	Stanford'72	25	5	20	80	scores incomplete	10
								untestable	7
"	"	"	"	"	"	"	"	discharged	2
								entered late	1
"	"	"	IPMS '73	"	23	2	8	no failures obtained before instruction	2
6 08 14 48	"	14	Stanford'72	375	297	78	21	scores incomplete	10
								score not meaningful	10
"	"	"	"	"	"	"	"	absent for posttest	9
								test not administered in site yet	8
"	"	"	"	"	"	"	"	untestable	10
								number of years in school not given	2
"	"	"	"	"	"	"	"	discharged	17
								entered late	9
"	"	"	"	"	"	"	"	truant	3

(1) Identify the participants by specific grade level (e.g., grade 3, grade 9). Where several grades are combined, enter the last two digits of the component code.
(2) Identify the test used and year of publication (MAT-70, SDAT-74, Houghton Mifflin (IPMS) Level 1 etc.)
(3) Number of participants in the activity.
(4) Number of participants included in the pre and posttest calculations.
(5) Number and percent of participants not tested and/or not analyzed
(6) Specify all reasons why students were not tested and/or analyzed. If any further documentation is available, please attach to this form. If further space is needed to specify and explain data loss, attach additional pages to this form.
(7) For each reason specified, provide a separate number count.

DATA LOSS FORM, CONT. Function # 09-61093

Component Code	Activity Code	(1) Group I.D.	(2) Test Used	(3) Total N	(4) Number Tested/ Analyzed	(5) Participants Not Tested/ Analyzed N	(5) %	(6) Reasons Why Students Were Not Tested, Or If Tested, Were Not Analyzed	Number
6 0 8 1 4 4 8	7 1 5	14	IPMS '73	375	349	26	7	no failures obtained on CRT before instruction	26
6 0 8 1 5 4 8	7 1 5	15	Stanford'72	1110	743	367	33	scores incomplete	37
								score not meaningful	58
"	"	"	"	"	"	"	"	absent for posttest	145
"	"	"	"	"	"	"	"	test not given in site yet	7
								untestable	31
"	"	"	"	"	"	"	"	wrong test given	4
								number of years in school not given	2
"	"	"	"	"	"	"	"	discharged	56
								entered late	5
"	"	"	"	"	"	"	"	truant	22
"	"	"	IPMS	"	869	241	22	untestable	17
								discharged	56
"	"	"	"	"	"	"	"	truant	22
								no failures obtained before instruction	146
6 0 8 1 6 4 8	7 1 5	16	Stanford'72	308	153	155	50	scores incomplete	11
								score not meaningful	8
"	"	"	"	"	"	"	"	absent for posttest	43
								untestable	24
"	"	"	"	"	"	"	"	no grade given	1
								discharged	42
"	"	"	"	"	"	"	"	truant	26
"	"	"	IPMS '73	"	200	108	35	untestable	24
								discharged	42
"	"	"	"	"	"	"	"	truant	26
								no failures obtained before instruction	16
6 0 9 1 4 4 8	7 2 0	14	Stanford'72	103	64	39	38	score incomplete	18
								score not meaningful	1
"	"	"	"	"	"	"	"	absent for posttest	18
								discharged	2

DATA LOSS FORM, CONT. Function # 09-61633

Component Code	Activity Code	Group I.D.	Test Used	Total N	Number Tested/ Analyzed	Participants Not Tested/ Analyzed		Reasons Why Students Were Not Tested, Or If Tested, Were Not Analyzed	
						N	%		Number
6 0 9 1 4 4 8	7 2 0	14	IPMS '74	103	77	26	25	discharged	2
								no failures obtained before instruction	24
6 0 9 1 5 4 8	"	15	Stanford'72	207	131	76	39	scores incomplete	16
								score not meaningful	2
"	"	"	"	"	"	"	"	absent for posttest	30
								test not given to all in site yet	9
"	"	"	"	"	"	"	"	wrong test given	13
								discharged	4
"	"	"	"					entered late	2
"	"	"	IPMS '74	"	143	64	31	discharged	4
								truant	2
"	"	"	"	"	"	"	"	no failures obtained before instruction	58

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Urban and Community Programs Evaluation
Albany, New York 12234

MAILED INFORMATION REPORT FOR CATEGORICALLY AIDED EDUCATION PROJECTS

SECTION II

1975-76 School Year

Due Date: July 1, 1976

SED Project Number: 3 0 7 5 0 0 | 7 6 | 0 0 3 | | |

BE Function Number (N.Y.C. only): 0 9 6 1 & 9 3

Project Title Improving Instruction and Services in Schools for Socially Maladjusted, Emotionally Disturbed Children

School District Name 75

School District Address 110 Livingston Street
Brooklyn, New York 11201

Name and Title of Person Completing this form:

Name Rebecca C. Curtis, Ph.D.

Title Consultant/Evaluator

Telephone Number 212 (Area Code) 724-3584

Date this form was completed June / 15 / 1976.

Table 9 Historical Regression Design (6-step Formula) for reporting norm referenced achievement test in Reading and Mathematics.

In the Table below, enter the requested assessment information about the tests used to evaluate the effectiveness of major project component/activities in achieving cognitive objectives. This form requires means obtained from scores in the form of grade equivalent units as processed by the 6-step formula. (see District Evaluator's Handbook of Selected Evaluation Procedures, 1974, p. 29-31) Before completing this table, read all footnotes. Attach additional sheets if necessary.

Component Code	Activity Code	Test Used 1/	Form Pre	Form Post	Level Pre	Level Post	Total N 2/	Group ID 3/	Number Tested 4/	Pretest Date	Pretest Mean	Predicted Posttest Mean	Actual Posttest Date	Actual Posttest Mean	Obtained Value of t
6 0 8 1 4 4 8	7 1 5						375*		297*						
"	"	Stanford'72 A	B		Pri I	Pri I	61	14	46	10/75	2.10	2.24	5/76	2.54	2.851 p<.01
"	"	Stanford'72 A	B		Pri I	Pri I	33	14	25	11/75	2.00	2.15	5/76	2.46	3.024 p<.01
"	"	Stanford'72 A	B		Pri I	Pri I	9	14	9	11/75 12/75	2.52	2.72	4/76 5/76	3.39	2.547 p<.05
"	"	Stanford'72 A	B		Pri I	Pri I	1	gr. 4	1	11/75	2.5	2.6	4/76	3.8	N.A.
"	"	Stanford'72 A	B		Pri I	Pri I	3	gr. 5	3	11/75 2/76	2.70	2.82	2/76 5/76	3.00	1.114 N.S.
"	"	Stanford'72 A	B		Pri I	Pri I	4	14	4	12/75 1/76	2.10	2.14	2/76 2/76	3.05	1.724 p<.10
"	"									3/76			5/76		
"	"	Stanford'72 A	B		Pri II	Pri II	2	14	2	5/75	3.60	4.06	5/76	4.55	.910 N.S.
"	"	Stanford'72 A	B		Pri II	Pri II	137	14	103	10/75	2.90	3.15	5/76	3.43	2.732 p<.01

1/ Identify the test used and year of publication (MAT-58, CAT-70, etc.).
2/ Total number of participants in the activity.
3/ Identify the participants by specific grade level (e.g., grade 3, grade 5). Where several grades are combined, enter the 4th and 5th digits of the component code.
4/ Number of pupils for whom both pre and post test data are provided.
* Data estimates based upon prorate (N = 375)

Component Code	Activity Code	Test Used	Form		Level		Total N	Group ID	Number Tested	Pretest		Predicted Posttest Mean	Actual Posttest		Obtained Value of t
			Pre	Post	Pre	Post				Date	Mean		Date	Mean	
6081448	715	Stanford'72 A	B		Pri II	Pri II	43	14	32	10/75 11/75	2.54	2.72	4/76 5/76	3.27	3.270 p<.01
"	"	Stanford'72 A	B		Pri II	Pri II	12	14	12	10/75 12/75	4.59	4.82	3/76 5/76	5.22	1.210 p N.S.
"	"	Stanford'72 A	B		Pri II	Pri II	2	gr. 5	2	12/75 1/76	2.25	2.33	4/76 5/76	2.80	8.818 p<.01
"	"	Stanford'72 A	B		Pri II	Pri II	2	14	2	2/76	3.20	3.35	5/76	4.65	1.465 N.S.
"	"	Stanford'72 A	B		Pri II	Pri II	1	gr. 5	1	3/76	2.8	2.9	5/76	2.5	N.A.
"	"	Stanford'72 A	B		Pri III	Pri III	40	gr. 14	30	10/75	3.65	4.00	5/76	4.91	4.036 p<.001
"	"	Stanford'72 A	B		Pri III	Pri III	8	14	8	11/75	3.40	3.68	5/76	4.45	1.465 N.S.
"	"	Stanford'72 A	B		Pri III	Pri III	2	14	2	12/75	3.55	3.75	5/76	6.15	2.714 p<.10
"	"	Stanford'72 A	B		Pri III	Pri III	2	14	2	1/76	2.50	2.54	3/76	2.90	4.590 p<.05
"	"	Stanford'72 A	B		Int I	Int I	11	14	11	10/75	4.80	5.30	5/76	5.95	2.749 p<.01
"	"	Stanford'72 A	B		Int I	Int I	1	gr. 6	1	11/75	3.3	3.6	5/76	6.8	N.A.
"	"	Stanford'72 A	B		Int II	Int II	1	gr. 6	1	10/75	3.5	3.8	5/76	5.4	N.A.
6081548	"						1110*		743						
"	"	Stanford'72 A	B		Pri I	Pri I	154	15	94	10/75	2.14	2.24	5/76	2.66	4.746 p<.001
"	"	Stanford'72 A	B		Pri I	Pri I	15	15	15	11/75	2.41	2.51	5/76	2.69	0.574 N.S.
"	"	Stanford'72 A	B		Pri I	Pri I	19	15	19	10/75 12/75	2.27	2.36	3/76 5/76	2.74	2.058 p<.05
"	"	Stanford'72 A	B		Pri I	Pri I	2	gr.9	2	10/75 1/76	1.40	1.42	2/76 5/76	2.45	1.403 p N.S.
"	"	Stanford'72 A	B		Pri I	Pri I	2	15	2	2/76	2.15	2.19	5/76	2.10	-1.638 N.S.
"	"	Stanford'72 A	B		Pri I	Pri I	1	gr.9	1	3/76	1.3	1.3	5/76	1.7	N.A.

*Data estimates based upon prorate (N = 1110)

9, cont.

Component Code	Activity Code	Test Used	Form Pre	Form Post	Level Pre	Level Post	Total N	Group ID	Number Tested	Pretest Date	Pretest Mean	Predicted Posttest Mean	Actual Posttest Date	Actual Posttest Mean	Obtained Value of t
6 0 8 1 5 4 8	7 1 5	Stan-ford'72	A	B	Pri II	Pri II	255	15	156	10/75	2.64	2.80	5/76	3.26	5.107 p<.001
"	"	"	"	"	"	"	95	15	58	10/75 11/75	3.18	3.35	4/76 5/76	3.77	2.234 p<.05
"	"	"	"	"	"	"	14	15	14	11/75 12/75	2.69	2.98	5/76	3.21	2.43 p<.05
"	"	"	"	"	"	"	6	15	6	10/75 12/75	3.05	3.16	2/76 4/76	3.43	0.669 N.S.
"	"									1/76			5/76		
"	"	"	"	"	"	"	5	15	5	2/76	3.28	3.37	5/76	3.26	-0.248 N.S.
"	"	"	"	"	"	"	1	grp	1	11/75	5.9	6.0	1/76	4.8	N.A.
"	"	"	"	"	Pri II	Pri III	212	15	130	10/75	3.70	3.95	5/76	4.61	6.198 p<.001
"	"	"	"	"	"	"	85	15	52	10/75 11/75	4.05	4.27	4/76 5/76	4.82	3.960 p<.001
"	"	"	"	"	"	"	12	15	12	10/75 11/75	2.66	2.82	2/76 4/76	3.25	2.390 p<.05
										12/75			5/76		
"	"	"	"	"	"	"	2	[illegible]8	2	10/75 1/76	4.85	5.06	2/76 5/76	5.30	1.764 N.S.
"	"	"	"	"	"	"	8	15	8	1/76 2/76	3.69	3.79	4/76 5/76	4.79	2.95 p<.01
"	"	"	"	"	"	"	6	15	6	12/75 1/76	3.28	3.32	1/76 2/76, 3/76	4.15	2.48 p<.05
										3/76			4/76		
"	"	"	"	"	Int I	Int I	145	15	89	10/75	4.96	5.33	5/76	5.92	3.959 p<.001
"	"	"	"	"	"	"	16	15	16	11/75	5.56	5.88	5/76	6.11	1.025 N.S.
"	"	"	"	"	"	"	10	15	10	12/75	5.20	5.48	5/76	6.28	2.625 p<.05
"	"	"	"	"	"	"	1	gr. 7	1	1/76	5.8	6.1	5/76	7.9	N.A.

9, cont.

Component Code	Activity Code	Test Used	Form Pre	Form Post	Level Pre	Level Post	Total N	Group ID	Number Tested	Pretest Date	Pretest Mean	Predicted Posttest Mean	Actual Posttest Date	Actual Posttest Mean	Obtained Value of t
60815481	715	Stanford '72	A	B	Int I	Int I	3	15	3	10/75 1/76 2/76	4.87	4.99	1/76 4/76 5/76	5.27	0.885 N.S.
"	"	"	"	"	"	"	4	15	4	10/75 12/75 1/76	4.20	4.25	12/75 2/76 2/76	6.33	2.050 p<.10
"	"	"	"	"	Int II	Int II	13	15	13	10/75	6.03	6.48	5/76	7.00	1.174 N.S.
"	"	"	"	"	"	"	14	15	14	11/75	5.06	5.37	5/76	6.13	1.917 p<.05
"	"	"	"	"	"	"	1	gr 9	1	12/75	4.4	4.5	5/76	6.6	N.A.
"	"	"	"	"	"	"	1	gr. 9	1	10/75	6.5	6.7	1/76	3.1	N.A.
"	"	"	"	"	"	"	5	15	5	1/76 3/76	4.66	4.71	2/76 5/76	5.48	2.34 p<.05
"	"	"	"	"	Adv	Adv	2	15	2	10/75	4.45	4.75	5/76	9.00	3.419 p<.05
"	"	"	"	"	"	"	1	gr. 7	1	12/75	4.2	4.4	1/76	6.0	N.A.
60816481	"						308*		153						
"	"	"	"	"	Pri I	Pri I	79	16	26	10/75	2.88	3.01	5/76	3.57	3.355 p<.01
"	"	"	"	"	"	"	9	16	9	11/75	2.88	2.99	5/76	3.43	1.900 p<.05
"	"	"	"	"	"	"	2	16	1	12/75	2.4	2.5	5/76	2.9	N.A.
"	"	"	"	"	"	"	2	16	2	1/76	3.45	3.55	5/76	3.35	-0.465 N.S.
"	"	"	"	"	Pri II	Pri II	10	16	10	10/75 11/75	3.41	3.56	4/76 5/76	4.06	1.444 p<.10
"	"	"	"	"	"	"	2	16	2	12/75	2.80	2.90	5/76	3.25	6.379 p<.05
"	"	"	"	"	Pri III	Pri III	61	16	20	11/75	5.57	5.84	5/76	6.11	0.953 N.S.
"	"	"	"	"	"	"	1	16	1	1/76	3.6	3.7	5/76	3.8	N.A.

*Data estimates based upon prorate (N = 308)

9,cont.

Component Code	Activity Code	Test Used	Form Pre	Form Post	Level Pre	Level Post	Total N	Group ID	Number Tested	Pretest Date	Pretest Mean	Predicted Posttest Mean	Actual Posttest Date	Actual Posttest Mean	Obtained Value of t
6081648	715	Stanford'72	A	B	Pri III	Pri III	2	16	2	12/75 3/76	4.80	4.84	1/76 4/76	4.80	-0.087 N.S.
"	"	"	"	"	Int I	Int I	9	16	9	10/75	5.12	5.42	5/76	5.72	1.260 N.S.
"	"	"	"	"	"	"	89	16	29	11/75	6.07	6.36	5/76	7.04	1.39 N.S.
"	"	"	"	"	"	"	6	16	6	11/75 12/75	7.50	7.83	4/76 5/76	8.32	0.880 N.S.
"	"	"	"	"	"	"	1	16	1	11/75	8.9	9.1	3/76	6.7	N.A.
"	"	"	"	"	"	"	3	16	3	11/75 3/76	6.93	6.98	12/75 4/76	6.90	-0.091 N.S.
"	"	"	"	"	Int II	Int II	8	16	8	10/75 11/75	6.05	6.35	4/76 5/76	7.98	2.690 p<.05
"	"	"	"	"	"	"	1	16	1	12/75	5.2	5.4	5/76	5.2	N.A.
"	"	"	"	"	"	"	3	16	3	10/75 11/75 1/76	4.83	4.95	1/76 2/76 4/76	7.37	2.572 p<.05
"	"	"	"	"	"	"	4	16	4	10/75 11/76 2/76	5.90	5.99	12/75 12/75 4/76	7.93	2.198 p<.05
"	"	"	"	"	Adv	Adv	5	16	5	10/75	6.12	6.36	5/76	6.96	2.170 p<.05
"	"	"	"	"	"	"	6	16	6	11/75	6.25	6.48	5/76	6.90	1.423 N.S.
"	"	"	"	"	"	"	1	16	1	10/75	6.9	7.1	3/76	6.6	N.A.
"	"	"	"	"	"	"	2	16	2	2/76	5.70	5.82	5/76	7.00	1.131 N.S..
"	"	"	"	"	"	"	2	16	2	3/76	6.60	6.67	4/76 5/76	6.70	0.300 N.S.
6091448	720						103*		64						
"	"	"	"	"	Pri I	Pri I	2	gr. 5	2	10/75	1.50	1.57	5/76	1.80	0.512 N.S.
"	"	"	"	"	Pri II	Pri II	36	14	21	10/75	3.55	3.89	5/76	4.49	2.290 p<.05

*Data estimates based on prorate (N = 103)

9, cont.

Component Code	Activity Code	Test Used	Form Pre	Form Post	Level Pre	Level Post	Total N	Group ID	Number Tested	Pretest Date	Pretest Mean	Predicted Posttest Mean	Actual Posttest Date	Actual Posttest Mean	Obtained Value of t
6 0 9 1 4 4 8	7 2 0	Stan-ford'72	A	B	Pri II	Pri II	3	gr.6	3	11/75	3.63	3.92	5/76	4.23	.549 N.S.
"	"	"	"	"	"	"	1	gr.6	1	12/75	2.2	2.3	5/76	3.8	N.A.
"	"	"	"	"	"	"	59	14	35	10/75	2.82	3.07	5/76	3.99	4.736 p<.001
"	"	"	"	"	"	"	1	gr.5	1	12/75	2.0	2.12	4/76	4.4	N.A.
"	"	"	"	"	"	"	1	gr4	1	2/76	3.7	3.80	5/76	5.6	N.A.
6 0 9 1 5 4 8	"						207 *		131						
"	"	"	"	"	"	"	4	15	4	10/75	3.77	4.04	5/76	4.03	-0.010 N.S.
"	"	"	"	"	"	"	2	gr. 8	2	12/75	3.20	3.34	5/76	3.40	0.065 N.S.
"	"	"	"	"	Pri III	Pri III	176	15	100	10/75	3.65	3.91	5/76	4.69	7.044 p<.001
"	"	"	"	"	"	"	2	gr. 7	2	11/75	1.90	1.97	5/76	3.60	N.A. $(\frac{3.65}{0})$
"	"	"	"	"	"	"	9	15	9	11/75 12/75	4.70	4.95	4/76 5/76	5.30	1.110 N.S.
"	"	"	"	"	"	"	6	gr. 8	6	1/76	5.62	5.83	5/76	5.97	0.403 N.S.
"	"	"	"	"	"	"	5	15	5	10/76 2/76	5.84	6.05	1/76 5/76	6.16	0.251 N.S.
"	"	"	"	"	Int I	Int I	2	gr. 8	2	12/75	5.90	6.21	5/76	6.55	0.979 N.S.
"	"	"	"	"	"	"	1	gr. 8	1	1/76	4.5	4.7	5/76	5.0	N.A.

* Data estimates based upon prorate (N = 207)

B/E # 0961693

Table 12 Components with small number of eligible participants. (Replaces Table 29 of 1974-75 MIR)

If the district funded a project in which the total number of pupils treated by any component code summed to 30 or less, please use the following table. Do not identify each pupil by name; assign each pupil a permanent student number, and give complete test information on each pupil as indicated in the table. Before completing this form, read all footnotes. Attach additional sheets if necessary

Pupil #	Component Code	Activity Code	Test Used	Form		Level		Grade Level	Achievement Pretest		Achievement Posttest		Number Contact Hours 3/	Screening Test 4/		
				Pre	Post	Pre	Post		Date	Standard Score 2/	Date	Standard Score 2/		Test 1/	Date	Standard Score
1	6 0 8 1 3 4	8 7 1 5	Stanford '72 read.	A	B	Pri I	Pri I	3	12/75	2.2	5/76	2.3	60	Stanford '72 read.	12/75	2.2
2	"	"	"	"	"	"	"	"	"	2.0	"	1.5	60	"	"	2.0
3	"	"	"	"	"	"	"	"	"	1.3	"	1.3	60	"	"	1.3
4	"	"	"	"	"	"	"	"	11/75	1.0	"	3.5	72	"	11/75	1.0
5	"	"	"	"	"	"	"	"	"	1.2	"	1.7	72	"	"	1.2

1/ Identify test used and year of publication (MAT-58 reading; CAT-70 math, etc).
2/ Publisher's Standard Score. (See publisher's manual). Scaled scores are also acceptable.
3/ Enter the total number of contact hours that this individual received in supplementary services from this funding source.
4/ (Same as #1 above). The screening test is the test that was employed to establish eligibility during the needs assessment/planning phase of the project.

5. Criterion Referenced Test (CRT) Results.

In the table below, enter the requested information about criterion referenced test results used to evaluate the effectiveness of programs in reading and mathematics; particularly for those of less than 60 hours duration. Use the Instructional Mastery codes appended to this form for those skills which the program attempted to improve. Please provide data for each test used and each level tested. Use additional sheets if necessary.

Component Code	Instructional Mastery Code	Publisher	Level	Pretest No. of Pupils		Posttest	
				Passing (1)	Failing (2)	No. of Pupils from Col. (2) Passing	No. of Pupils from Col. (2) Failing
6 0 8 1 3 4 8	2 1 0 1	Houghton Mifflin	1	4	2	1	1
"	2 1 0 2	"	1	3	5	4	1
"	2 1 0 3	"	1	3	7	3	4
"	2 1 0 4	"	1	8	10	6	4
"	2 1 0 5	"	1	6	11	8	3
"	2 1 0 6	"	1	3	4	2	2
"	2 2 0 1	"	1	3	4	4	0
"	2 2 0 3	"	1	1	1	1	0
"	2 2 0 5	"	1	2	2	2	0
"	2 2 0 7	"	1	3	1	1	0
"	2 3 0 5	"	1	1	1	1	0
"	2 4 0 6	"	1	1	1	1	0
"	2 5 0 2	"	1	2	1	0	1
"	2 1 0 1	"	2	0	1	0	1

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest Passing	Pretest Failing	Posttest Passing	Posttest Failing
6 0 8 1 3 4 8	2 1 0 2	Houghton-Mifflin	2	3	1	0	1
"	2 1 0 3	"	2	2	4	3	1
"	2 1 0 4	"	2	0	2	2	0
"	2 1 0 5	"	2	0	1	0	1
"	2 1 0 6	"	2	3	1	1	0
"	2 1 0 7	"	2	2	1	1	0
"	2 1 0 8	"	2	0	1	0	1
"	2 1 0 9	"	2	2	1	1	0
"	2 1 1 0	"	2	0	1	0	1
"	2 2 0 1	"	2	2	1	0	1
"	2 2 0 3	"	2	1	2	2	0
"	2 2 0 5	"	2	2	1	1	0
"	2 2 0 8	"	2	0	1	1	0
"	2 3 0 4	"	2	1	1	0	1
"	2 4 0 6	"	2	1	1	0	1
"	2 4 1 2	"	2	0	1	0	1
"	2 5 0 2	"	2	0	1	0	1
"	2 1 0 2	"	3	1	1	1	0
"	2 1 0 3	"	3	1	1	1	0
"	2 1 0 4	"	3	1	1	0	1

12, cont.

Component Code	Mastery code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
60813478	2106	Houghton Mifflin	3	5	2	2	0
"	2107	"	3	2	1	1	0
"	2109	"	3	2	3	3	0
"	2203	"	3	0	1	0	1
"	2502	"	3	0	1	0	1
"	2304	"	4	1	1	1	0
"	2109	"	5	1	2	2	0
"	2204	"	5	2	1	1	0
"	2208	"	5	1	1	1	0
"	2102	"	6	0	1	1	0
"	2105	"	6	0	1	1	0
"	2106	"	6	0	1	1	0
"	2201	"	6	0	1	1	0
"	2202	"	6	0	1	1	0
"	2203	"	6	0	1	1	0
"	2204	"	6	0	1	1	0
"	2208	"	6	0	1	1	0
60814478	2101	"	1	14	4	4	0
"	2102	"	1	43	37	24	13
"	2103	"	1	31	25	16	9

13 cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 1 0 4	Houghton - Mifflin		47	29	19	10
"	2 1 0 5	"	1	47	37	28	9
"	2 1 0 6	"	1	27	53	41	12
"	2 1 0 7	"	1	3	1	1	0
"	2 1 0 8	"	1	1	3	2	1
"	2 1 1 0	"	1	21	11	8	3
"	2 2 0 1	"	1	39	8	7	1
"	2 2 0 2	"	1	2	2	1	1
"	2 2 0 3	"	1	14	2[illegible]	19	7
"	2 2 0 5	"	1	11	8	7	1
"	2 2 0 7	"	1	12	2	1	1
"	2 3 0 3	"	1	0	1	1	0
"	2 3 0 4	"	1	0	2	1	1
"	2 3 0 5	"	1	19	20	10	10
"	2 4 0 2	"	1	12	10	6	4
"	2 4 0 4	"	1	25	9	5	4
"	2 4 0 6	"	1	9	19	12	7
"	2 4 0 8	"	1	18	15	8	7
"	2 4 0 9	"	1	14	11	5	6
"	2 4 1 0	"	1	20	5	3	2

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 4 1 2	Houghton Mifflin	1	8	4	4	0
"	2 5 0 2	"	1	15	12	4	8
"	2 1 0 1	"	2	11	3	3	0
"	2 1 0 2	"	2	47	38	31	7
"	2 1 0 3	"	2	66	27	23	4
"	2 1 0 4	"	2	39	31	23	8
"	2 1 0 5	"	2	3	3	3	0
"	2 1 0 6	"	2	68	51	37	14
"	2 1 0 7	"	2	27	16	14	2
"	2 1 0 9	"	2	50	27	21	6
"	2 1 1 0	"	2	23	9	7	2
"	2 2 0 1	"	2	59	21	20	1
"	2 2 0 2	"	2	30	10	8	2
"	2 2 0 3	"	2	39	25	24	1
"	2 2 0 5	"	2	9	7	7	0
"	2 2 0 7	"	2	19	2	2	0
"	2 2 0 8	"	2	16	9	7	2
"	2 3 0 3	"	2	2	1	1	0
"	2 3 0 4	"	2	25	8	7	1
"	2 3 0 5	"	2	40	37	20	17

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 4 0 2	Houghton Mifflin	2	27	16	11	5
"	2 4 0 3	"	2	5	5	3	2
"	2 4 0 4	"	2	23	14	9	5
"	2 4 0 6	"	2	15	11	5	6
"	2 4 0 8	"	2	33	11	2	9
"	2 4 0 9	"	2	11	11	9	2
"	2 4 1 0	"	2	24	15	9	6
"	2 4 1 2	"	2	5	7	5	2
"	2 5 0 1	"	2	0	2	2	0
"	2 5 0 2	"	2	9	9	6	3
"	2 1 0 2	"	3	46	17	17	0
"	2 1 0 3	"	3	17	6	4	2
"	2 1 0 4	"	3	37	12	10	2
"	2 1 0 6	"	3	39	31	22	9
"	2 1 0 7	"	3	31	14	13	1
"	2 1 0 8	"	3	2	2	2	0
"	2 1 0 9	"	3	40	28	20	8
"	2 1 1 0	"	3	36	5	5	0
"	2 2 0 1	"	3	59	13	11	2
"	2 2 0 2	"	3	17	4	2	2

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 2 0 3	Houghton Mifflin	3	21	23	21	2
"	2 2 0 4	"	3	8	5	5	0
"	2 2 0 7	"	3	12	1	1	0
"	2 2 0 8	"	3	6	4	3	1
"	2 3 0 3	"	3	6	1	1	0
"	2 3 0 4	"	3	26	9	8	1
"	2 3 0 5	"	3	10	8	5	3
"	2 4 0 2	"	3	7	8	5	3
"	2 4 0 3	"	3	5	6	4	2
"	2 4 0 4	"	3	23	8	7	1
"	2 4 0 6	"	3	18	9	7	2
"	2 4 0 8	"	3	28	12	6	6
"	2 4 0 9	"	3	28	6	5	1
"	2 4 1 0	"	3	23	5	3	2
"	2 4 1 2	"	3	3	1	1	0
"	2 5 0 1	"	3	3	1	0	1
"	2 5 0 2	"	3	8	15	14	1
"	2 1 0 2	"	4	19	11	10	1
"	2 1 0 3	"	4	0	1	1	0
"	2 1 0 5	"	4	16	11	10	1

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 1 0 6	Houghton Mifflin	4	15	26	23	3
"	2 1 0 7	"	4	17	28	28	0
"	2 1 0 8	"	4	44	12	8	4
"	2 1 0 9	"	4	12	21	20	1
"	2 1 1 0	"	4	10	7	6	1
"	2 2 0 1	"	4	36	9	7	2
"	2 2 0 2	"	4	16	7	7	0
"	2 2 0 3	"	4	14	14	14	0
"	2 2 0 4	"	4	11	14	13	1
"	2 2 0 5	"	4	2	1	1	0
"	2 2 0 7	"	4	10	4	3	1
"	2 2 0 8	"	4	5	10	8	2
"	2 3 0 4	"	4	14	13	12	1
"	2 3 0 5	"	4	11	5	2	3
"	2 4 0 3	"	4	5	3	2	1
"	2 4 0 4	"	4	21	8	6	2
"	2 4 0 5	"	4	5	4	4	0
"	2 4 0 6	"	4	11	8	6	2
"	2 4 0 8	"	4	14	8	6	2
"	2 4 0 9	"	4	16	8	7	1

Component Code							Mastery Code				Publisher	Level	Protest		Posttest	
													Passing	Failing	Passing	Failing
6	0	8	1	4	4	8	2	4	1	0	Houghton Mifflin	4	8	4	3	1
"							2	4	1	2	"	4	5	6	4	2
"							2	5	0	1	"	4	6	3	3	0
"							2	5	0	2	"	4	9	7	7	0
"							2	5	0	3	"	4	2	7	4	3
"							2	5	0	4	"	4	6	3	2	1
"							2	5	0	6	"	4	5	3	2	1
							2	1	0	2	"	5	6	4	4	0
"							2	1	0	6	"	5	4	7	6	1
"							2	1	0	7	"	5	5	3	3	0
"							2	1	0	8	"	5	9	7	7	0
"							2	1	0	9	"	5	4	8	6	2
"							2	1	1	0	"	5	1	4	3	1
"							2	2	0	3	"	5	3	4	3	1
"							2	2	0	5	"	5	0	1	1	0
"							2	3	0	4	"	5	2	2	1	1
"							2	3	0	5	"	5	0	4	4	2
"							2	4	0	4	"	5	7	3	3	0
"							2	4	0	5	"	5	1	1	1	0
"							2	4	0	6	"	5	4	3	3	0

13. Cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 4 0 8	Houghton Mifflin	5	2	1	1	0
"	2 4 0 9	"	5	4	1	1	0
"	2 4 1 0	"	5	2	4	3	1
"	2 4 1 1	"	5	0	1	1	0
"	2 4 1 2	"	5	1	1	1	0
"	2 5 0 1	"	5	1	1	1	0
"	2 5 0 2	"	5	9	6	5	1
"	2 5 0 3	"	5	2	2	2	0
"	2 5 0 4	"	5	1	4	4	0
"	2 1 0 2	"	6	3	1	1	0
"	2 1 0 5	"	6	5	1	1	0
"	2 1 0 6	"	6	4	2	2	0
"	2 1 0 7	"	6	4	4	4	0
"	2 1 0 9	"	6	4	2	2	0
"	2 2 0 1	"	6	2	3	2	1
"	2 2 0 2	"	6	2	2	2	0
"	2 2 0 3	"	6	1	3	3	0
"	2 2 0 4	"	6	0	3	3	0
"	2 2 0 8	"	6	0	1	1	0
"	2 3 0 4	"	6	2	2	2	0

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 3 0 5	Houghton Mifflin	6	0	1	1	0
"	2 5 0 2	"	6	4	7	7	0
"	2 5 0 3	"	6	0	1	1	1
"	2 5 0 4	"	6	0	1	1	0
6 0 8 1 4 4 8	2 1 0 1	"	1	8	5	4	1
"	2 1 0 2	"	1	80	40	29	11
"	2 1 0 3	"	1	51	35	28	7
"	2 1 0 4	"	1	62	36	29	7
"	2 1 0 5	"	1	59	46	38	8
"	2 1 0 6	"	1	34	55	34	21
"	2 1 0 7	"	1	0	1	0	1
"	2 1 0 8	"	1	2	1	1	0
"	2 1 0 9	"	1	0	4	3	1
"	2 1 1 0	"	1	28	5	4	1
"	2 2 0 1	"	1	55	17	13	4
"	2 2 0 2	"	1	2	1	0	1
"	2 2 0 3	"	1	33	23	22	1
"	2 2 0 5	"	1	22	8	7	1
"	2 2 0 7	"	1	17	4	4	0
"	2 2 0 8	"	1	1	1	0	1

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 3 0 5	Houghton Mifflin	1	38	20	10	10
"	2 4 0 2	"	1	20	4	4	0
"	2 4 0 4	"	1	36	8	6	2
"	2 4 0 6	"	1	16	15	11	4
"	2 4 0 8	"	1	21	4	3	1
"	2 4 0 9	"	1	22	14	11	3
"	2 4 1 0	"	1	18	6	3	3
"	2 5 0 1	"	1	0	1	0	1
"	2 5 0 2	"	1	28	9	6	3
"	2 1 0 1	"	2	13	6	5	1
"	2 1 0 2	"	2	80	34	28	6
"	2 1 0 3	"	2	90	63	51	12
"	2 1 0 4	"	2	55	55	45	10
"	2 1 0 5	"	2	7	8	6	2
"	2 1 0 6	"	2	87	89	67	22
"	2 1 0 7	"	2	31	24	17	7
"	2 1 0 8	"	2	3	1	1	0
"	2 1 0 9	"	2	46	29	22	7
"	2 1 1 0	"	2	52	18	16	2
"	2 2 0 1	"	2	80	17	15	2

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 2 0 2	Houghton Mifflin	2	24	9	8	1
"	2 2 0 3	"	2	39	34	31	3
"	2 2 0 5	"	2	7	8	6	2
"	2 2 0 7	"	2	13	3	2	1
"	2 2 0 8	"	2	13	7	5	2
"	2 3 0 3	"	2	2	2	1	1
"	2 3 0 5	"	2	81	41	24	17
"	2 4 0 2	"	2	34	14	9	5
"	2 4 0 3	"	2	7	7	4	3
"	2 4 0 4	"	2	27	32	29	3
"	2 4 0 6	"	2	22	13	10	3
"	2 4 0 8	"	2	48	20	12	8
"	2 4 0 9	"	2	38	19	15	4
"	2 4 1 0	"	2	46	8	4	4
"	2 4 1 2	"	2	3	2	2	0
"	2 5 0 2	"	2	13	5	3	2
"	2 1 0 2	"	3	130	32	29	3
"	2 1 0 3	"	3	32	7	6	1
"	2 1 0 4	"	3	124	26	23	3
"	2 1 0 5	"	3	4	1	1	0

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 1 0 6	Houghton Mifflin	3	125	78	63	15
"	2 1 0 7	"	3	92	41	38	3
"	2 1 0 8	"	3	6	2	1	1
"	2 1 0 9	"	3	73	50	33	17
"	2 1 1 0	"	3	91	28	24	4
"	2 2 0 1	"	3	141	35	33	2
"	2 2 0 2	"	3	36	11	11	0
"	2 2 0 3	"	3	60	46	43	3
"	2 2 0 4	"	3	28	19	16	3
"	2 2 0 7	"	3	23	2	1	1
"	2 2 0 8	"	3	14	7	4	3
"	2 3 0 3	"	3	24	12	7	5
"	2 3 0 4	"	3	83	12	12	0
"	2 3 0 5	"	3	34	15	12	3
"	2 4 0 2	"	3	39	3	2	1
"	2 4 0 3	"	3	17	9	8	1
"	2 4 0 4	"	3	53	23	22	1
"	2 4 0 6	"	3	32	17	15	2
"	2 4 0 8	"	3	66	14	7	7
"	2 4 0 9	"	3	54	13	9	4

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 4 1 0	Houghton Mifflin	3	71	12	9	3
"	2 4 1 2	"	3	15	8	6	2
"	2 5 0 1	"	3	16	6	5	1
"	2 5 0 2	"	3	45	40	37	3
"	2 5 0 4	"	3	1	1	1	0
"	2 1 0 1	"	4	2	1	1	0
"	2 1 0 2	"	4	90	36	29	7
"	2 1 0 4	"	4	3	1	1	0
"	2 1 0 5	"	4	73	24	20	4
"	2 1 0 6	"	4	55	55	42	13
"	2 1 0 7	"	4	62	40	32	8
"	2 1 0 8	"	4	149	26	22	4
"	2 1 0 9	"	4	45	41	36	5
"	2 1 1 0	"	4	30	30	21	9
"	2 2 0 1	"	4	112	18	17	1
"	2 2 0 2	"	4	24	7	7	0
"	2 2 0 3	"	4	38	29	25	4
"	2 2 0 4	"	4	29	9	9	0
"	2 2 0 5	"	4	10	5	4	1
"	2 2 0 7	"	4	5	4	2	2

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 2 0 8	Houghton Mifflin	4	11	8	4	1
"	2 3 0 4	"	4	46	41	34	7
"	2 3 0 5	"	4	24	5	4	1
"	2 4 0 3	"	4	10	1	0	1
"	2 4 0 4	"	4	49	35	25	10
"	2 4 0 5	"	4	6	3	3	0
"	2 4 0 6	"	4	11	17	15	2
"	2 4 0 8	"	4	37	34	24	10
"	2 4 0 9	"	4	39	13	10	3
"	2 4 1 0	"	4	20	27	22	5
"	2 4 1 2	"	4	10	2	1	1
"	2 5 0 1	"	4	7	2	2	0
"	2 5 0 2	"	4	24	11	6	5
"	2 5 0 3	"	4	9	4	4	0
"	2 5 0 4	"	4	8	1	0	1
"	2 1 0 2	"	5	66	23	17	6
"	2 1 0 3	"	5	0	3	3	0
"	2 1 0 4	"	5	1	1	0	1
"	2 1 0 5	"	5	9	6	5	1
"	2 1 0 6	"	5	36	51	41	10

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 4 4 8	2 1 0 7	Houghton Mifflin	5	36	48	41	7
"	2 1 0 8	"	5	111	23	21	2
"	2 1 0 9	"	5	36	41	41	0
"	2 1 1 0	"	5	15	19	16	3
"	2 2 0 1	"	5	60	13	11	2
"	2 2 0 2	"	5	16	7	6	1
"	2 2 0 3	"	5	27	25	23	2
"	2 2 0 4	"	5	33	15	10	5
"	2 2 0 5	"	5	1	2	2	0
"	2 2 0 7	"	5	12	7	4	3
"	2 2 0 8	"	5	17	9	7	2
"	2 3 0 4	"	5	50	21	18	3
"	2 3 0 5	"	5	12	20	12	8
"	2 4 0 3	"	5	9	8	5	3
"	2 4 0 4	"	5	27	17	12	5
"	2 4 0 6	"	5	10	9	7	2
"	2 4 0 8	"	5	15	12	11	1
"	2 4 0 9	"	5	24	4	2	2
"	2 4 1 0	"	5	24	10	5	5
"	2 4 1 1	"	5	9	2	1	1

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 5 4 8	2 4 1 2	Houghton Mifflin	5	7	4	4	0
"	2 5 0 1	"	5	8	1	1	0
"	2 5 0 2	"	5	23	15	8	7
"	2 5 0 3	"	5	8	1	1	0
"	2 5 0 4	"	5	4	1	1	0
"	2 5 0 6	"	5	7	2	2	0
"	2 1 0 2	"	6	47	22	15	7
"	2 1 0 5	"	6	35	9	4	5
"	2 1 0 6	"	6	35	12	8	4
"	2 1 0 7	"	6	35	14	10	4
"	2 1 0 8	"	6	1	3	2	1
"	2 1 0 9	"	6	21	14	11	3
"	2 1 1 0	"	6	30	13	11	2
"	2 2 0 1	"	6	43	18	16	2
"	2 2 0 2	"	6	25	8	7	1
"	2 2 0 3	"	6	11	29	25	4
"	2 2 0 4	"	6	13	21	19	2
"	2 2 0 5	"	6	1	1	1	0
"	2 2 0 7	"	6	6	4	4	0
"	2 2 0 8	"	6	14	4	4	0

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 5 4 8	2 3 0 3	Houghton Mifflin	6	5	6	4	2
"	2 3 0 4	"	6	29	18	17	1
"	2 3 0 5	"	6	5	9	7	2
"	2 4 0 3	"	6	0	9	9	0
"	2 4 0 4	"	6	18	17	15	2
"	2 4 0 5	"	6	3	4	4	0
"	2 4 0 6	"	6	5	10	7	3
"	2 4 0 8	"	6	10	7	7	0
"	2 4 1 0	"	6	10	19	18	1
"	2 4 1 1	"	6	2	4	3	1
"	2 4 1 2	"	6	3	5	3	2
"	2 5 0 1	"	6	3	3	2	1
"	2 5 0 2	"	6	17	27	20	7
"	2 5 0 3	"	6	4	3	2	1
"	2 5 0 4	"	6	3	5	3	2
"	2 5 0 6	"	6	4	8	4	4
6 0 8 1 6 4 8	2 1 0 2	"	1	5	4	4	0
"	2 1 0 3	"	1	6	6	5	1
"	2 1 0 4	"	1	8	4	3	1
"	2 1 0 5	"	1	5	8	6	2

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 6 4 8	2 1 0 6	Houghton Mifflin	1	5	8	6	2
"	2 2 0 1	"	1	4	2	2	0
"	2 2 0 3	"	1	4	2	2	0
"	2 2 0 5	"	1	5	1	1	0
"	2 2 0 7	"	1	3	1	1	0
"	2 3 0 5	"	1	2	3	2	1
"	2 4 0 2	"	1	4	2	1	1
"	2 4 0 4	"	1	4	1	1	0
"	2 4 0 6	"	1	1	2	2	0
"	2 4 0 8	"	1	2	1	0	1
"	2 4 0 9	"	1	2	2	2	0
"	2 4 1 0	"	1	1	1	0	1
"	2 4 1 2	"	1	1	1	1	0
"	2 5 0 2	"	1	1	3	0	3
"	2 5 0 4	"	1	1	1	1	0
"	2 5 0 6	"	1	0	1	0	1
"	2 1 0 2	"	2	15	3	3	0
"	2 1 0 3	"	2	14	7	6	1
"	2 1 0 4	"	2	10	2	1	1
"	2 1 0 6	"	2	5	9	7	2

13. cont

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 6 4 8	2 1 0 7	Houghton Mifflin	2	10	1	1	0
"	2 1 1 0	"	2	0	5	5	0
"	2 2 0 1	"	2	8	2	1	1
"	2 2 0 3	"	2	4	3	2	1
"	2 2 0 4	"	2	1	1	1	0
"	2 2 0 7	"	2	2	1	0	1
"	2 2 0 8	"	2	2	4	3	1
"	2 3 0 4	"	2	9	4	3	1
"	2 3 0 5	"	2	9	8	6	2
"	2 4 0 2	"	2	15	2	1	1
"	2 4 0 3	"	2	0	3	1	2
"	2 4 0 4	"	2	7	5	4	1
"	2 4 0 6	"	2	6	6	4	2
"	2 4 0 8	"	2	4	7	3	4
"	2 4 0 9	"	2	6	5	4	1
"	2 4 1 0	"	2	2	2	1	1
"	2 4 1 2	"	2	1	3	2	1
"	2 5 0 2	"	2	1	2	2	0
"	2 1 0 2	"	3	19	3	3	0
"	2 1 0 3	"	3	2	2	2	0

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
60816482	2104	Houghton Mifflin	3	14	6	6	0
"	2106	"	3	6	10	7	3
"	2107	"	3	11	6	5	1
"	2109	"	3	11	5	3	2
"	2110	"	3	8	4	2	2
"	2201	"	3	5	10	10	0
"	2202	"	3	6	6	5	1
"	2203	"	3	7	3	2	1
"	2204	"	3	5	3	2	1
"	2207	"	3	2	1	0	1
"	2208	"	3	5	6	1	1
"	2303	"	3	12	3	3	0
"	2304	"	3	15	6	6	0
"	2305	"	3	9	3	3	0
"	2402	"	3	20	4	4	0
"	2404	"	3	6	10	10	0
"	2406	"	3	4	8	4	4
"	2408	"	3	8	8	7	1
"	2409	"	3	4	8	8	0
"	2410	"	3	4	4	1	3

13, cont

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 6 4 8	2 4 1 2	Houghton Mifflin	3	2	3	3	0
"	2 5 0 1	"	3	2	2	2	0
"	2 5 0 2	"	3	2	6	4	2
"	2 1 0 2	"	4	19	3	3	0
"	2 1 0 3	"	4	2	2	2	0
"	2 1 0 4	"	4	18	4	4	0
"	2 1 0 6	"	4	6	10	7	3
"	2 1 0 7	"	4	13	6	5	1
"	2 1 0 8	"	4	45	9	9	0
"	2 1 1 0	"	4	3	5	2	3
"	2 2 0 1	"	4	10	7	6	1
"	2 2 0 2	"	4	6	4	3	1
"	2 2 0 3	"	4	6	5	3	2
"	2 2 0 4	"	4	3	3	3	0
"	2 2 0 5	"	4	1	2	2	0
"	2 2 0 7	"	4	7	6	4	2
"	2 2 0 8	"	4	3	1	0	1
"	2 3 0 4	"	4	16	11	10	1
"	2 3 0 5	"	4	1	2	1	1
"	2 4 0 4	"	4	7	14	10	4

13, cont.

Component Code							Mastery Code				Publisher	Level	Pretest		Posttest	
													Passing	Failing	Passing	Failing
6	0	8	1	6	4	8	2	4	0	5	Houghton Mifflin	4	0	1	1	0
"							2	4	0	6	"	4	4	4	2	2
"							2	4	0	8	"	4	1	10	6	4
"							2	4	0	9	"	4	3	4	3	1
"							2	4	1	0	"	4	2	6	3	3
"							2	4	1	2	"	4	0	1	0	1
"							2	5	0	2	"	4	1	3	3	0
"							2	1	0	2	"	5	7	2	2	0
"							2	1	0	5	"	5	0	1	1	0
"							2	1	0	6	"	5	5	9	7	2
"							2	1	0	7	"	5	7	4	3	1
"							2	1	0	8	"	5	20	6	6	0
"							2	1	1	0	"	5	3	5	2	3
"							2	2	0	1	"	5	9	8	6	2
"							2	2	0	2	"	5	4	5	2	3
"							2	2	0	3	"	5	1	5	2	3
"							2	2	0	4	"	5	2	4	4	0
"							2	2	0	5	"	5	0	1	0	1
"							2	2	0	7	"	5	5	2	2	0
"							2	2	0	8	"	5	1	4	3	1

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 6 4 8	2 3 0 4	Houghton Mifflin	5	10	4	4	0
"	2 3 0 5	"	5	3	5	4	1
"	2 4 0 3	"	5	1	2	1	1
"	2 4 0 4	"	5	5	12	7	5
"	2 4 0 5	"	5	0	1	1	0
"	2 4 0 6	"	5	3	8	5	3
"	2 4 0 8	"	5	0	6	4	2
"	2 4 0 9	"	5	1	5	3	2
"	2 4 1 0	"	5	1	3	2	1
"	2 4 1 1	"	5	2	3	2	1
"	2 4 1 2	"	5	0	3	1	2
"	2 5 0 1	"	5	0	1	0	1
"	2 5 0 2	"	5	5	6	6	0
"	2 5 0 3	"	5	1	1	1	0
"	2 5 0 4	"	5	1	1	1	0
"	2 5 0 6	"	5	0	1	0	1
"	2 1 0 2	"	6	10	2	2	0
"	2 1 0 5	"	6	6	1	1	0
"	2 1 0 6	"	6	9	3	1	2
"	2 1 0 9	"	6	9	2	2	0

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 6 4 8	2 1 1 0	Houghton Mifflin	6	6	4	3	1
"	2 2 0 1	"	6	4	7	5	2
"	2 2 0 2	"	6	4	5	4	1
"	2 2 0 3	"	6	1	8	7	1
"	2 2 0 4	"	6	1	5	4	1
"	2 2 0 7	"	6	5	1	0	1
"	2 2 0 8	"	6	1	4	2	2
"	2 3 0 3	"	6	5	3	2	1
"	2 3 0 5	"	6	3	4	3	1
"	2 4 0 3	"	6	0	2	2	0
"	2 4 0 4	"	6	2	4	4	0
"	2 4 0 5	"	6	0	2	2	0
"	2 4 0 6	"	6	1	6	4	2
"	2 4 0 8	"	6	0	4	2	2
"	2 4 1 0	"	6	2	10	5	5
"	2 4 1 1	"	6	0	2	1	1
"	2 4 1 2	"	6	1	5	3	2
"	2 5 0 1	"	6	0	2	1	1
"	2 5 0 2	"	6	5	9	8	1
"	2 5 0 3	"	6	6	1	1	0

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 8 1 6 4 8	2 5 0 4	Houghton Mifflin	6	2	1	0	1
6 0 9 1 4 4 8	1 1 0 1	"	1	6	2	1	1
"	1 1 0 2	"	1	0	1	1	0
"	1 1 0 6	"	1	3	1	1	0
"	1 1 0 8	"	1	0	2	1	1
"	1 1 1 2	"	1	6	2	2	0
"	1 2 0 3	"	1	0	1	1	0
"	1 3 0 5	"	1	0	1	0	1
"	1 3 0 6	"	1	0	1	1	0
"	1 7 0 4	"	1	0	1	1	0
"	1 1 0 1	"	2	0	17	17	0
"	1 1 0 2	"	2	1	1	1	0
"	1 1 0 3	"	2	4	1	0	1
"	1 1 0 4	"	2	0	1	0	1
"	1 1 0 6	"	2	0	1	0	1
"	1 1 0 7	"	2	15	2	2	0
"	1 1 0 8	"	2	1	3	0	3
"	1 1 0 9	"	2	6	1	1	0
"	1 1 1 0	"	2	0	1	1	0
"	1 1 1 2	"	2	3	3	2	1

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 9 1 4 4 8	1 2 0 1	Houghton Mifflin	2	0	12	11	1
"	1 2 0 3	"	2	0	2	0	2
"	1 2 0 5	"	2	0	1	0	1
"	1 3 0 2	"	2	3	3	3	0
"	1 3 0 5	"	2	0	3	3	0
"	1 3 0 6	"	2	0	5	4	1
"	1 4 0 1	"	2	0	1	1	0
"	1 9 0 2	"	2	1	4	4	0
"	1 1 0 1	"	3	2	23	22	1
"	1 1 0 2	"	3	1	10	10	0
"	1 1 0 3	"	3	1	13	13	0
"	1 1 0 7	"	3	2	7	6	1
"	1 1 0 8	"	3	5	12	9	3
"	1 1 0 9	"	3	1	4	3	1
"	1 1 1 0	"	3	3	6	4	2
"	1 1 1 2	"	3	1	13	12	1
"	1 1 1 4	"	3	0	14	13	1
"	1 2 0 1	"	3	1	25	22	3
"	1 2 0 2	"	3	1	13	9	4
"	1 2 0 3	"	3	3	4	4	0

13. cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
609144	1205	Houghton Mifflin	3	1	10	8	2
"	1208	"	3	0	8	7	1
"	1209	"	3	1	13	12	1
"	1302	"	3	2	14	12	2
"	1305	"	3	3	10	9	1
"	1306	"	3	3	10	8	2
"	1401	"	3	7	11	6	5
"	1902	"	3	4	8	6	2
"	1101	"	4	1	13	3	0
"	1102	"	4	1	1	1	0
"	1103	"	4	1	2	2	0
"	1107	"	4	1	3	3	0
"	1108	"	4	1	13	13	0
"	1109	"	4	1	3	2	1
"	1110	"	4	1	4	3	1
"	1111	"	4	0	1	1	0
"	1114	"	4	0	1	0	1
"	1201	"	4	0	11	11	0
"	1205	"	4	0	4	2	2
"	1208	"	4	0	2	1	1

13, cont.

Component Code							Mastery Code				Publisher	Level	Protest		Posttest	
													Passing	Failing	Passing	Failing
6	0	9	1	4	4	8	1	2	0	9	Houghton Mifflin	4	0	3	2	1
"							1	3	0	5	"	4	0	3	2	1
"							1	3	0	6	"	4	0	1	0	1
"							1	4	0	1	"	4	1	2	2	0
"							1	6	0	4	"	4	2	2	2	0
"							1	9	0	2	"	4	0	4	3	1
"							1	1	0	1	"	5	0	4	4	0
"							1	1	0	3	"	5	0	1	1	0
"							1	1	0	7	"	5	0	4	4	0
"							1	1	0	8	"	5	0	4	4	0
"							1	1	0	9	"	5	0	1	1	0
"							1	1	1	0	"	5	0	3	3	0
"							1	1	1	1	"	5	0	4	4	0
"							1	1	1	4	"	5	0	1	1	0
"							1	2	0	3	"	5	0	3	3	0
"							1	2	0	5	"	5	0	2	1	1
"							1	2	0	7	"	5	0	1	0	1
"							1	2	0	8	"	5	0	3	2	1
"							1	3	0	2	"	5	0	2	2	0
"							1	3	0	5	"	5	0	1	1	0

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 9 1 4 4 8	1 3 0 6	Houghton Mifflin	5	0	1	0	1
"	1 5 0 3	"	5	0	7	2	5
"	1 5 0 4	"	5	0	4	0	4
"	1 9 0 2	"	5	0	1	1	0
6 0 9 1 5 4 8	1 1 0 1	"	1	0	5	5	0
"	1 1 0 2	"	1	0	1	1	0
"	1 1 0 3	"	1	0	2	1	1
"	1 1 0 7	"	1	0	2	2	0
"	1 1 0 9	"	1	0	1	1	0
"	1 1 1 0	"	1	1	1	1	0
"	1 1 1 2	"	1	4	5	4	1
"	1 2 0 3	"	1	0	1	1	1
"	1 2 0 5	"	1	0	1	1	0
"	1 3 0 5	"	1	0	1	1	0
"	1 1 0 1	"	2	0	15	15	0
"	1 1 0 2	"	2	1	5	4	1
"	1 1 0 3	"	2	2	3	2	1
"	1 1 0 7	"	2	2	7	5	2
"	1 1 0 8	"	2	2	4	4	0
"	1 1 1 0	"	2	0	1	1	0

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13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 9 1 5 4 8	1 1 1 2	Houghton Mifflin	2	1	2	2	0
"	1 2 0 1	"	2	0	26	26	0
"	1 2 0 3	"	2	2	1	1	0
"	1 2 0 5	"	2	0	1	1	0
"	1 3 0 2	"	2	0	6	1	5
"	1 3 0 6	"	2	0	2	1	1
"	1 4 0 1	"	2	0	1	1	0
"	1 9 0 2	"	2	0	5	2	3
"	1 1 0 1	"	3	2	33	33	0
"	1 1 0 2	"	3	1	15	13	2
"	1 1 0 3	"	3	4	7	5	2
"	1 1 0 7	"	3	16	18	11	7
"	1 1 0 8	"	3	16	15	8	7
"	1 1 0 9	"	3	3	9	6	3
"	1 1 1 0	"	3	4	8	3	5
"	1 1 1 1	"	3	0	1	1	0
"	1 1 1 2	"	3	2	11	11	0
"	1 1 1 4	"	3	0	13	12	1
"	1 2 0 1	"	3	2	60	56	4
"	1 2 0 2	"	3	1	32	28	4
"	1 2 0 3	"	3	1	4	4	0

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 9 1 5 4 8	1 2 0 5	Houghton Mifflin	3	0	38	34	4
"	1 2 0 8	"	3	0	38	35	3
"	1 2 0 9	"	3	0	35	32	3
"	1 3 0 2	"	3	2	7	7	0
"	1 3 0 5	"	3	5	13	12	1
"	1 3 0 6	"	3	2	12	10	2
"	1 4 0 1	"	3	15	12	5	7
"	1 7 0 4	"	3	2	17	10	7
"	1 9 0 2	"	3	1	6	5	2
"	1 1 0 1	"	4	2	30	30	0
"	1 1 0 2	"	4	1	12	11	1
"	1 1 0 3	"	4	1	5	4	1
"	1 1 0 7	"	4	2	7	7	0
"	1 1 0 8	"	4	2	41	41	0
"	1 1 0 9	"	4	1	6	5	1
"	1 1 1 0	"	4	1	12	7	5
"	1 1 1 1	"	4	1	6	6	0
"	1 1 1 4	"	4	0	5	4	1
"	1 1 1 6	"	4	0	4	1	3
"	1 2 0 1	"	4	3	28	27	1

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 9 1 5 4 8	1 2 0 2	Houghton Mifflin	4	1	3	3	0
"	1 2 0 3	"	4	0	5	5	0
"	1 2 0 5	"	4	0	36	29	7
"	1 2 0 8	"	4	0	36	32	4
"	1 2 0 9	"	4	0	35	31	4
"	1 3 0 5	"	4	1	11	9	2
"	1 4 0 1	"	4	1	5	5	0
"	1 6 0 4	"	4	2	6	6	0
"	1 7 0 4	"	4	2	3	3	0
"	1 9 0 2	"	4	1	8	8	0
"	1 1 0 1	"	5	1	21	20	1
"	1 1 0 4	"	5	0	1	0	1
"	1 1 0 7	"	5	0	4	4	0
"	1 1 0 8	"	5	1	31	31	0
"	1 1 0 9	"	5	0	3	2	1
"	1 1 1 0	"	5	0	7	6	1
"	1 1 1 1	"	5	1	6	6	0
"	1 1 1 4	"	5	0	3	2	1
"	1 1 1 6	"	5	0	3	1	2
"	1 2 0 1	"	5	0	1	0	1

13, cont.

Component Code	Mastery Code	Publisher	Level	Pretest		Posttest	
				Passing	Failing	Passing	Failing
6 0 9 1 5 4 8	1 2 0 3	Houghton Mifflin	5	1	5	4	1
"	1 2 0 5	"	5	0	24	22	2
"	1 2 0 8	"	5	0	25	21	4
"	1 2 0 9	"	5	0	27	23	4
"	1 3 0 2	"	5	0	4	3	1
"	1 3 0 5	"	5	1	4	4	0
"	1 4 0 1	"	5	1	5	4	1
"	1 5 0 3	"	5	2	16	2	14
"	1 5 0 4	"	5	0	16	0	16
"	1 7 0 4	"	5	0	1	1	0
"	1 9 0 2	"	5	1	2	2	0
"	1 1 0 1	"	6	0	1	1	0
"	1 1 0 4	"	6	0	1	1	0
"	1 1 0 7	"	6	0	1	1	0
"	1 1 0 8	"	6	0	27	27	0
"	1 1 0 9	"	6	0	1	1	0
"	1 1 1 1	"	6	0	1	1	0
"	1 2 0 1	"	6	0	1	0	1
"	1 2 0 5	"	6	0	15	13	2
"	1 2 0 9	"	6	0	1	0	1

13, cont.

Component Code							Mastery Code				Publisher	Level	Pretest		Posttest	
													Passing	Failing	Passing	Failing
6	0	9	1	5	4	8	1	3	0	5	Houghton Mifflin	6	1	1	0	1
"							1	4	0	1	"	6	0	4	0	4
"							1	9	0	2	"	6	0	1	1	0

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EXEMPLARY PROGRAM ABSTRACT

Component Code	Activity Code	Objective Code
60814, 60815, 60816	715	801

A total of 1793 students participated in these three components. The students tested made gains of 1.4, 1.2, and 1.2 months on the average in reading during each month of the program for each component, respectively. Students who participated in the program for seven months generally obtained significantly higher posttest scores than were expected on the basis of their previous performance ($p < .01$). The one-to-one and small group instruction, the sophisticated reading systems equipment, the careful assessment of each pupil's disabilities, and the inservice training workshop may account for the success of this program.

Component Code	Activity Code	Objective Code
60914, 60915	720	801

A total of 310 students participated in these two components. The students tested improved an average of 1.6 and 1.3 months in mathematics for each month in the program in each component, respectively. Posttest scores were generally significantly higher than anticipated posttest scores ($p < .05$) for students who participated in the program for seven months. Possible reasons include the individualized instruction and the calculators and games utilized.